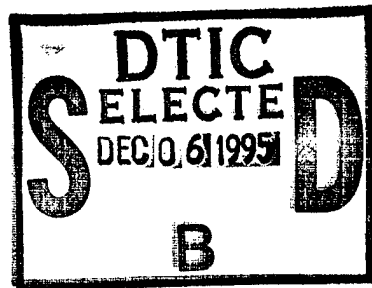
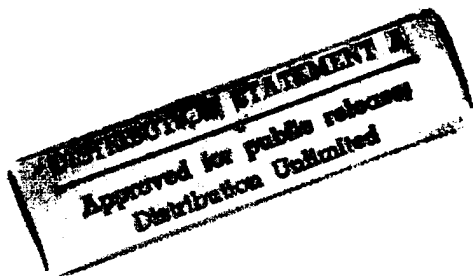

Logistics Management Institute

Using Process Redesign and
Information Technology
to Improve Procurement

PL022RD2



Daniel J. Drake



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CHAPTER 1

Introduction

Automated information technologies enable development of improved procurement processes. These improvements are not limited to speeding the preparation and handling of procurement documents and files. When combined with a rethinking of work tasks to eliminate non-value-added activities, information-technology-enhanced processes promise major improvements in office productivity and buying effectiveness.

Current automated procurement systems use computer software to prepare and print hard-copy contractual documents and files. Automation is typically used to improve the paper production process but not necessarily to improve information quality or decision-making.

Procurement automation now has the potential to evolve beyond the preparation and printing of paper files and documents to improve buyer access to information for better buying decisions. Information technologies are available to help the buyer access, analyze, store, and convey information. For instance

- ◆ document imaging technology, combined with workflow software, enables a redesign of work activity and job content;
- ◆ messaging technologies such as electronic mail, electronic data interchange (EDI), and facsimile transmissions enable improved communication of information;
- ◆ networks improve connections both internally among supporting personnel and externally with suppliers; and
- ◆ data bases connected by data networks organize streams of information generated by automated systems.

All of these information technologies are coming together to reshape the procurement process. For example, current procurement actions use a sequential step-by-step process as the file and document move between desks, awaiting action at each step in the process. Redesigned procurement processes will change the way work is performed. Work need not be completed sequentially, since actions (e.g., coordination) can be taken concurrently with other actions. Also, because the procurement computer can be programmed to recognize certain characteristics of the requirement (e.g., dollar value, commodity or service type, possible sources), a draft procurement plan, document, and file can be generated automatically and will be displayed on the buyer's computer display terminal.

Most of the suggested process improvements rely on information technology to enable better access to or sharing of information, but automation is not a requirement. The primary idea was to improve the process and then to apply automated techniques. A number of previous Logistics Management Institute (LMI) reports¹ suggested procurement process improvements. This current effort continues our study of procurement processes and of how information technology can best be applied following the redesign of procurement, contract administration, and payment processes.

This research paper documents procurement process improvements identified by the author and a group of DoD installation-level procurement experts who participated in a series of March-through-July 1993 procurement process modeling sessions at the Air Force Logistics Management Agency, Gunter Annex, Maxwell Air Force Base, Alabama. The procurement process modeling team included functional experts from the Army, the Navy, the Air Force, and the Defense Logistics Agency. Those experts used Integrated Computer and Manufacturing Definition (IDEF) modeling techniques, facilitated by an IDEF modeling expert, to decompose the procurement process into separate activities. Each activity was then evaluated to determine whether it contributed value and whether it should be retained in the redesigned procurement process. The IDEF modeling effort for the future automated system, referred to as the "to be" process, generated the 23 process improvement ideas described in this research document.

Each idea for business improvement was placed into one of four categories: DoD/industry information exchange improvements; internal procurement process improvements; policy-related improvements; and standard procurement data structures. The treatment of each improvement in this report summarizes the current process, the proposed process, and the benefits anticipated from implementing the improvement.

Although this paper addresses DoD procurement process improvements, much of what is proposed can be applied to other Federal departments and agencies. Where DoD procedures, forms, or codes are referenced, Federal procurement activities should apply their own unique practices.

Some of the ideas set forth in this research paper are particularly in harmony with the Report of the National Performance Review (NPR).² Specifically, the NPR recommends increased access to information and expanded use of electronic commerce.

¹See, for example, LMI Report PL022R1, *Paperless Procurement: The Impact of Advanced Automation*, and LMI Report PL022RD1, *Improving Procurement Through Process Redesign*.

²*From Red Tape to Results – Creating a Government that Works Better and Costs Less*, Vice President Al Gore, September 7, 1993, Government Printing Office, Washington, D.C.

CHAPTER 2

Improvements to DoD/Industry Information Exchange

The five process improvements described in this chapter are designed to improve timeliness and enhance the flow of information between the government buyer and the commercial seller. Instead of using paper forms to collect information or to transmit information, these improvements use information technology. The first two improvements address the problems of soliciting offers from prospective contractors. The next two streamline the ordering of goods and services. The last is of general benefit at all stages of the acquisition cycle.

STREAMLINE SOLICITATION MAILING LIST REGISTRATION

This process improvement would eliminate manual processing of paper mailing list registrations at each buying office and centralize registration processing at regional offices. No longer will companies interested in doing business with the government be required to register with dozens – if not hundreds – of buying offices. No longer will these individual buying activities separately maintain separate solicitation mailing lists.

Current Process

Firms interested in obtaining government contracts must contact each government contracting office to register their interest in solicitations for specific products or services. There are no Service, agency, regional, or national clearinghouses for this information. The contracting office responds to the prospective contractor's request for information by mailing a Standard Form (SF) 129, *Solicitation Mailing List Application*, to the prospective contractor. The prospective contractor completes the form by stating the products/services it is prepared to provide and returns it for processing. The contracting office receives the SF 129, analyzes the data, and then assigns a local vendor number. Some activities mail the prospective contractor a Department of Defense (DD) Form 2051, *Request for Assignment of a Commercial and Government Entity (CAGE) Code*, to obtain a DoD-wide identification code. The contractor-provided information is entered into an automated or manual solicitation mailing list for future selection of firms to receive solicitations.

Future Process

A regional (or national) computer center will hold the automated solicitation mailing list for its region (or the nation). Local buying offices will access this list for information on prospective contractors but will not be responsible for its maintenance. That function will be performed at the region, but most tasks will be automated. Prospective contractors will be given a choice of how they register. Sophisticated companies can access the automated registration module on the regional computer via their microcomputers, equipped with telecommunications modems. Companies without a PC/modem can utilize a touch-tone telephone to access a 1-800 telephone number connected to an interactive voice response system that will guide the registrant through the steps with a touch-tone keypad. Companies not comfortable with either of these steps can register by visiting a local small business development center or procurement technical assistance program office, or even by walking into a buying activity's small business office. The walk-in registrant will be asked questions while the small business specialist accesses the automated registration module via a PC and modem. This variety of input means tied to a regional system is illustrated in Figure 2-1.

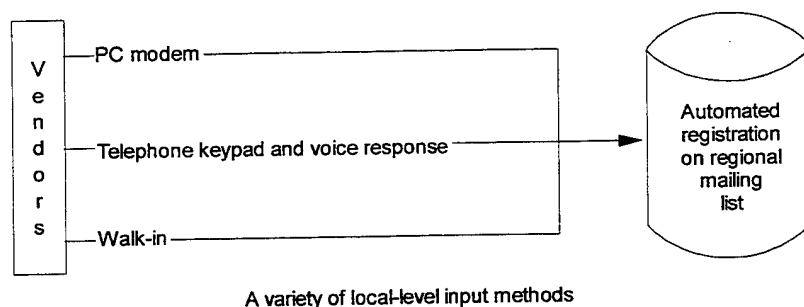


Figure 2-1.
Solicitation Mailing List Registration at a Regional Computer Center

We believe that CAGE code application is necessary for all contractors. Prospective contractors should be asked for this unique identification code, to be provided to all business entities doing business with DoD. An electronic transaction from the automated registration module to the Defense Logistics Services Center's CAGE data base can verify the contractor's code and, if necessary, either provide the correct code or obtain a new code.

Once prospective contractors register their interest, they are registered at any buying offices they select in the region. Their distinctive CAGE code will be checked against all registrants to ensure that duplicate entries under different names are identified and standardized.

Benefits of the Future Process

Establishing a regional solicitation mailing list will eliminate government duplication (maintaining lists at every buying office) and eliminate duplicate registrations of prospective contractors on the multiple lists. A reduction in clerical workload will be achieved by all parties. More importantly, the increased number of registrants across the region (those previously registered only at their local buying offices) should increase the number of potential offerors and thereby increase competition.

Additionally, there should be a considerable improvement in the quality of solicitation mailing data. As the process of data collection and input is shifted from local procurement clerks, who now extract data from the prospective contractor's application form, to the prospective contractor – the source of the information – fewer input errors should be experienced. The contractor is better motivated to maintain its information accurately.

ADVERTISE AND DISSEMINATE CONTRACTING OPPORTUNITIES ELECTRONICALLY

Contracting officers are required by statute and acquisition regulations to publicize proposed contract actions, as a means of increasing competition, broadening industry participation, and assisting small businesses. The current methods of disseminating business opportunity information do not use the most current and effective information technologies. Using modern information technologies can provide wider dissemination of information and improve timeliness. Personal computers equipped with telephone modems allow business firms to query solicitation data bases to identify opportunities for furnishing products and services they are interested in selling to the Federal government.

Current Process

The method selected by the Federal government to publicize procurement opportunities depends on the dollar value of the proposed contract action. If the proposed action is expected to exceed the small purchase limitation in Federal Acquisition Regulation (FAR) Part 13, *Small Purchase and Other Simplified Procedures*, the action must be synopsisized and published in the *Commerce Business Daily (CBD)*, a publication of the U. S. Department of Commerce. For DoD actions expected to exceed \$5,000 (\$10,000 for civil agencies), a notice of the solicitation or a copy of the solicitation is to be displayed in a public place at the contracting activity. Additional methods are also available. Periodic handouts of proposed contracts; brief announcements in newspapers, magazines, or trade publications; and local trade associations all may be used to disseminate information.

Also, the *CBD* is used by contracting officers to publish special procurement notices about business fairs, pre-proposal conferences, meetings, and the availability of draft solicitations or draft specifications for review. And contracting officers are responsible for having available a reasonable number of copies of a solicitation that has been published in the *CBD*.

These current methods rely on print media and postal mail to physically display information or convey it to interested parties. However, the FAR does provide for electronic transmission of the synopsis request from the buying activity to the *CBD*. The electronic transmission method could be expanded beyond this purely internal government communication.

Future Process

Modern information technologies permit procurement activities to provide business opportunity information to a central data base or bulletin board from which interested contractors can extract information. The need for a central organization, namely the Department of Commerce (DoC), to publish this information has been obviated by methods more advanced than printing and mailing.

Before the advent of the electronic information age, the *CBD* provided a central clearinghouse for collecting, and organizing business opportunities and disseminating them to interested parties. They merely had to subscribe to the *CBD* and await its arrival in the mail. Some entrepreneurs improved this process by acquiring *CBDs* as soon as they were published and making the information available through on-line data bases to which they sold subscriptions.

Our recommendation is to combine the current electronic transmission of synopses with the capabilities of on-line data bases into a centralized government-wide opportunities bulletin board. It would offer immediate, on-line access to all procurement information. The DoC's role would be to manage the central data base and the electronic interfaces for submitting and accessing synopses. An additional future improvement would promise on-line access to the synopsis and to the entire solicitation.

Benefits of the Future Process

An electronic *CBD* will improve the speed with which synopsis information is disseminated. No longer will solicitations be held up 6 to 10 days awaiting publication of the synopsis, a step that will reduce procurement administrative lead-time (PALT) by almost one week.

Electronic display of synopses will ensure that business opportunities are disseminated more widely to the public. With synopses accessible on-line through menu screens, interested parties can locate information on their specific interests by selecting the appropriate commodity or service category. No longer will *CBD* subscribers have to read large amounts of fine print to locate items of

interest. The outcome should be increased competition. If synopsis and access to solicitations are combined into one step, PALT could be reduced by another two weeks.

IMPLEMENT ELECTRONIC DATA INTERCHANGE

DoD issued almost 12 million procurement actions in FY93, with 98 percent of these actions valued at less than \$25,000. Many of these actions are prepared by automated procurement systems that could be modified to transmit electronic transactions to large-volume, automated contractors instead of issuing paper purchase orders or delivery orders that must be processed by hand.

Current Process

The majority of procurement actions issued by DoD are small purchase actions typically documented by issuing a DD Form 1155, *Order for Supplies or Services*. The DD Form 1155 is generally prepared by an automated procurement system that prints the order on a paper form. This document is then manually signed by a contracting officer before it is copied and distributed to the contractor. Many large-volume contractors have automated order processing tied to accounting, manufacturing, and shipping subsystems. Currently, the contractor must receive the mailed order, analyze it, extract pertinent information, and enter that information into the automated order processing system.

Almost all orders for small purchases are unilateral documents that do not require acceptance or acknowledgment by the contractor. For purchase orders, contract performance is acceptance, and the contracting activity knows that the contractor has accepted the order price and terms when an invoice or shipping notice arrives. The terms of indefinite-delivery contracts may permit unilateral orders direct to the contractor. Sometimes the contractor does not receive the order or misinterprets the order, and this may not be discovered for many days if not weeks.

Future Process

Instead of printing and mailing paper orders to automated contractors, the automated procurement system can produce an EDI purchase order transaction and send it electronically through a telecommunications network to the contractor's electronic address. The contractor's automated order processing system would periodically check its electronic mail box for orders. These electronic orders can then be used to automatically update various automated order receipt, accounting, production, and shipping processes throughout the company without any human intervention.

The contracting office's automated procurement system will be programmed to recognize which contractors are EDI-capable. Contractors not capable of receiving EDI transactions will still receive paper DD Form 1155s. This flexibility will permit DoD to implement EDI first where it makes the most business sense because of high volumes and potential savings. It will also allow smaller, less sophisticated contractors to receive paper facsimile documents.

Benefits of the Future Process

Benefits can be divided into two categories — direct and indirect. The primary direct benefit from EDI will be fewer clerical labor hours required to print, sort, copy, and mail purchase orders at the contracting office. It also offers the contractor clerical savings if orders can be automatically entered into its automated system.

Indirect benefits will come when using EDI to order from large indefinite-delivery contracts. These savings arise from better prices obtained when large-volume solicitations are used to competitively establish indefinite-delivery contracts or, in the case of sole source items, when large-quantity purchases are negotiated for delivery over the life of the contract. In this case, information technology merely enables consolidated ordering; it does not directly result in lower prices.

An additional benefit is the visibility EDI provides the contracting officer over the receipt and acceptance of the order by the contractor. EDI transactions can send acknowledgment and order status information back to the buying office for updating its procurement system.

ESTABLISH AN ELECTRONIC CATALOG PROCUREMENT NETWORK

An electronic catalog procurement network would give supply and procurement customers on-line access to an electronic catalog of pre-priced items that can be ordered directly by electronic means under prenegotiated contracts reflecting substantial price discounts. This streamlined ordering process will match customer requirements to products available in the marketplace through the pre-identification of an activity's commodity requirements; the establishment of an electronic on-line catalog of descriptions, known sources, available contracts with ordering provisions, and ordering procedures for each product; and the placement of electronic orders directly from the electronic catalog's menu screen to the vendor.

Current Process

Military activities that require supplies submit material requests or supply requisitions to the base supply office. At the base supply office, a supply analyst attempts to locate a suitable item in the Federal Supply Catalog or from the base's supply inventory. If item descriptions or part numbers match what is available through supply channels, the item is requisitioned from the supply system. When the item (or a substitute item) cannot be located or cannot be provided within required time, a purchase request (PR) is forwarded to the base procurement office, where a buyer attempts to locate sources and, depending on the product's dollar value, solicit potential vendors for quotations or bids.

This item/source locating process requires completion of the following six steps, as illustrated in Figure 2-2: (1) requirement identification, (2) supply analysis, (3) (if the item is not available from supply) PR submission, (4) PR receipt and analysis, (5) source identification, and (6) price solicitation.

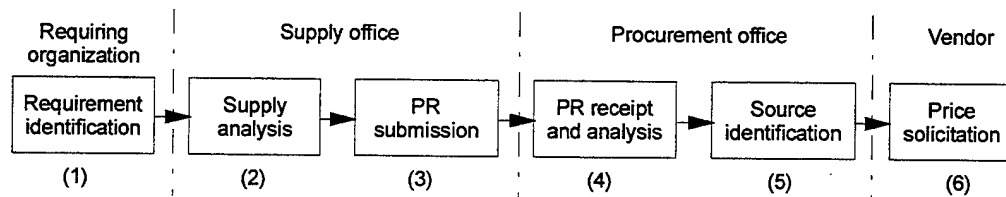


Figure 2-2.
Steps in Locating Sources for Required Items

Future Process

Under the proposed process, supply acquisition will be streamlined by (1) developing a "master list" of items required to support equipment and facilities on the base; (2) analyzing those items and organizing the high-demand items into commodity groups; (3) soliciting long-term indefinite-delivery contracts for the high-demand items; (4) establishing electronic ordering provisions as clauses in the resulting contracts; (5) building on-line electronic catalogs that give item, price, source, and contract information; and (6) providing requirers, supply analysts, and buyers with on-line access to the electronic catalog so they can place orders directly with the vendor.

The development of master item lists is not new. Base supply and procurement offices have records of previous acquisitions along with the product's description, source, and price. The new concept is that supply analysts and buyers will not wait for needs to be brought to their attention; instead they will attempt to forecast requirements before they occur. Ideally, people in a new, hybrid job position (material managers) will work with facility engineers, maintenance technicians, office equipment custodians, and laboratory personnel to identify all

equipment and systems controlled by each organization that could possibly meet their supply requirements. Manufacturers' and distributors' parts catalogs, maintenance item lists, and illustrated parts breakdowns will be analyzed to identify potential items. The material manager will be less reactive to demand and more proactive in forecasting demand.

The resulting master item list will be analyzed to identify those items with enough high-demand potential to warrant including them in a "market basket" of similar items (e.g., office supplies that, when competitively acquired, generate significant price discounts through economies of scale). The result will be negotiation of a long-term requirements contract with one vendor that can offer low prices for large procurements (when compared with single-item unit purchases) and can accommodate direct electronic ordering of items.

Currently, the China Lake Naval Air Warfare Center's Small Procurement Electronic Data Interchange (SPEDI) system uses competitively established requirements contracts, on-line electronic catalogs, electronic ordering, and bar-coded packages to achieve deliveries within 24 hours from order issuance, 40 percent discounts from retail prices, and reductions in supply warehousing requirements. Other high-volume procurement offices can achieve similar results.

On the other hand, base-level buying offices will have difficulty in managing such a process independently. They simply do not have the resources required for researching and analyzing the customers' requirements and the demand data to develop the market baskets for solicitation. (It took 9 months for China Lake to establish its initial competitively placed requirements contract using electronic catalogs and ordering.) Also, buyers at individual buying offices will duplicate each other's work in developing their product market baskets. Therefore, a better approach would build on the China Lake project by creating a regional electronic network of base support requirements contracts. Each base would manage a market basket for a commodity group (e.g., plumbing supplies) and share the resulting electronic catalog with the other base procurement offices participating in the regional electronic network. Figure 2-3 illustrates this concept, which we call the Electronic Catalog Procurement Network. The network uses centralized or regional resources to research items, prepare solicitations, and award contracts to build the electronic catalogs, but it provides for decentralized local access and ordering. Local activities would electronically provide their item demand history and projections to the central buying activity for analysis to determine potential market baskets of products. Those market baskets would be solicited as long-term (up to 5 years) requirements contracts that permit electronic ordering, invoicing, and payment.

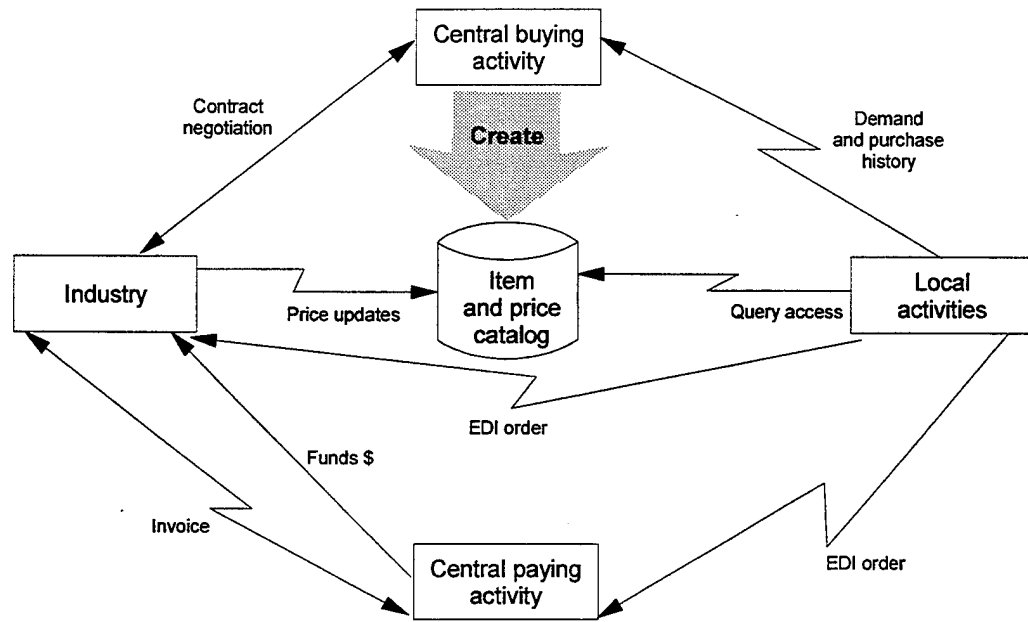


Figure 2-3.
Electronic Catalog Procurement Network

Several enhancements to the Electronic Catalog Procurement Network are possible. One idea is to include — in the catalog — item descriptions and prices for all multiple-award schedules established by Federal departments and agencies, so that other agencies can identify available items, prices, and ordering terms. Another approach is to permit suppliers to electronically update their prices on the basis of some prearranged mechanism (e.g., downward-only price adjustment, or an economic price adjustment clause), so that the catalog prices will always be current. Also, the Electronic Catalog Procurement Network could list recurring-demand open market items and recurring demand nonmandatory items that vendors could periodically update with their latest prices, thereby creating an electronic marketplace where requirements are matched with available items at market prices.

Benefits of the Future Process

Establishing and maintaining a regional (or national) electronic catalog network will permit centralized management of the master item file by specialized buyers with specific knowledge of their commodities and suppliers. This approach will allow for better information about suppliers, prices, substitute items, etc. The various customers of the base's procurement office will then be able to match their requirements directly with marketplace offerings.

To quantify the benefits discussed above, we rely on China Lake's experience, where the cost of processing a material request (\$154 per action) along with a purchase order (\$500 per action) dropped from a total of \$654 under the

previous automated – but paper-dependent-method – to \$80 with the current paperless electronic catalog ordering method. In FY92, China Lake processed 15,427 electronic purchase orders for a cost avoidance of nearly \$8.9 million, in addition to achieving savings through reductions in the prices paid for its supply procurements. A conservative estimate is that China Lake saved 10 percent – or \$350,000 – on the value of supply items bought through the electronic catalog and ordering process in FY92, as a result of the lower unit prices offered when large numbers and volumes of items are solicited under long-term requirements contracts (as opposed to the relatively high unit prices quoted when small-quantity requests for quotations (RFQs) are issued).

AUTOMATE THE PUBLIC'S ACCESS TO RELEASABLE PROCUREMENT INFORMATION

This process improvement would minimize the need to retrieve public information from procurement files in response to Freedom of Information Act (FOIA) requests to buying activities.

Current Process

Buying activities receive FOIA requests on many subjects. Some of those requests are for information releasable to the public about contract award recipients and the contract price. Those requests must be researched to identify the correct procurement action and then to locate its file. Once the file is retrieved, the buyer or contracting officer must locate the correct information from the award document. That information is then sent to the FOIA requester, who is charged for retrieval and reproduction costs.

Some buying activities currently receive FOIA requests from individuals who are tracking every solicitation, bid abstract, and procurement award. The workload to satisfy these requests is burdensome and detracts from the primary procurement mission.

Future Process

With automated procurement systems available that record every solicitation, offer, and award, a dedicated FOIA file containing all the publicly releasable information will be established. Information that is competition-sensitive or proprietary will not be written to the FOIA file. The cost of establishing and maintaining that FOIA data base will be charged to the FOIA requesters through on-line user fees via a 1-900 telephone number. This data base will then be accessible by anyone who possesses a PC and a modem. Query capability will be granted to FOIA requesters so that they can easily retrieve information. Menu-driven query screens with preformatted queries will be needed.

Benefits of the Future Process

Making contract information available to the public through on-line query access to nonsensitive files will reduce the clerical time needed to process FOIA requests and to research procurement files. Beyond achieving a reduced workload for FOIA clerks and reducing distraction of buyers and contracting officers, establishing a FOIA database of solicitation and award information would increase visibility of market prices, increase competitive pressures, and reduce prices in future competitions.

CHAPTER 3

Improvements to Internal Procurement Processes

The ten process improvements described in this chapter are designed to improve the preparation and review of procurement documents, files, and reports. These improvements center on making information more readily and more rapidly available to streamline the process flow and enhance the sharing of needed information.

IMPROVE STATEMENT OF WORK AND SPECIFICATION PREPARATION

Contracting officers are forced to edit and rewrite statements of work (SOWs) and specifications included in the requirements package. If the requirements package were better prepared, the contracting officer's time, which can be better utilized elsewhere, would be saved.

Current Process

Engineers and other requirements personnel usually prepare SOWs and specifications by following a general format or else by copying a previous submission. Often these technical personnel are not aware how requiring certain capabilities may limit competition, unnecessarily increase cost, and risk protests. The contracting officer must carefully review all SOWs and specifications for unduly restrictive or contradictory language.

This quality-control function on the contracting officer's part is necessary, because it eliminates major problems during the competitive phase. However, the contracting officer should not have to educate technical personnel on what is an acceptable requirements package.

Future Process

Part of the solution is to train technical personnel on how to write an acceptable requirements package, so as to reduce the contracting officer's quality-control efforts. Besides formal training, automated SOW preparation software has been developed to aid writers. If better training and preparation aids can be applied to the SOW- and specification-writing process, quality will be achieved

during SOW production and not when the SOW is reviewed, rejected, and corrected.

Benefits of the Future Process

The result will be better written SOWs and specifications, so that contracting officers will have more time for other tasks. Hopefully, better SOWs and specifications will reduce protests stemming from the use of inappropriately restrictive language.

ESTABLISH ELECTRONIC CONTRACT FILES

By establishing paperless electronic files as a byproduct of the procurement process, this process improvement would eliminate the labor-intensive maintenance and retrieval of paper procurement files. The benefit would be not only less clerical labor but also fewer lost files and less need for multiple copies of documents maintained at other offices across an installation.

Current Process

As the PR is assigned to the buyer, it forms the first item in the procurement file for the procurement action and document that will satisfy the requirement set forth in the PR. At every step in the process, additional paper memos, correspondence, forms, and documents are added to the file, resulting in large paper files that must be maintained by buyers and clerks at great labor expense. The storage of these files also requires considerable resources.

Procurement files are extremely structured, with almost every conceivable document assigned a section in the file in accordance with the contract file content checklist.

Future Process

With the availability of advanced information technologies, automated procurement systems can now write all of the required information to some form of electronic or optical mass media. When the PR is received electronically from the requiring office, it will be filed in the appropriate place in the electronic file. As the procurement plan is prepared in a word-processing system, it too will be stored electronically and tagged with the appropriate file label. Likewise, every scrap of information can be electronically stored, organized, and retrieved.

The automated system will be programmed to tag every electronic document with its appropriate identification number and its point in the procurement process. In other words, the system will know that the document in

question is the solicitation for the subject action and will file it accordingly. The buyer will merely select actions from a menu screen and enter data when prompted. As illustrated in Figure 3-1, the buyer will control the electronic file folder as it progresses through the process. The file folder will move automatically to the next individual's electronic workstation without having to wait for paper files to be moved from one "out" basket to the next "in" basket.

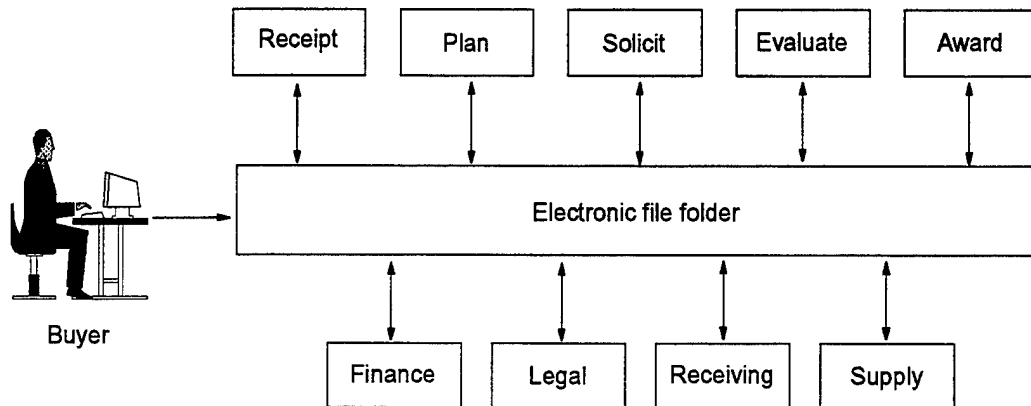


Figure 3-1
Electronic Procurement Files

Benefits of the Future Process

The most apparent benefit will be reduced clerical costs. But the real payoff is in the ability of the automated system to find all the information that previously was misplaced on someone's desk, in transit to another desk, or actually lost. Also, the time wasted in transporting paper files from one step in the process to the next step will be eliminated.

With only one set of procurement files — an electronic set constantly being updated and accessible to all individuals on the electronic network — parallel processing of reviews and coordinations can be accomplished. Also, the use of a single set of files (as opposed to the desk or buyer's copy and the official copy of the procurement file) will eliminate inconsistencies in data. This will be even more apparent if the electronic file folder concept can be extended to all functions that need access to procurement information. For example, if the accounting and finance office needs to reconcile disbursements against a contract's accounting citations and supply line items, it can access the electronic procurement document and the file via the local area network, reducing the errors caused by having separate offices and functions looking at separate (and many times incomplete) copies of the procurement file. With the electronic file folder, all the modifications will be present and current; under the present system, it often happens that the accounting and finance office does not have several modifications because they are in transit or misfiled.

STREAMLINE PROCUREMENT REVIEWS

An inordinate amount of time is spent reviewing routine procurement documents and files. Many of these reviews are repeated as a procurement is submitted to higher authority for approval. Also, since many procurement actions are for items or services that have previously been acquired, little value may be added to the process by repetitive reviews.

Current Process

The current process is based on authority delegated from the Military Department Secretary through the Head of the Contracting Activity to individual contracting offices and contracting officers, on the basis of the dollar value of the individual procurement. Generally, higher dollar value procurements are reviewed repeatedly before approval, because a hierarchical management structure uses sequential review levels to ensure that rules and procedures are followed at lower levels. The question raised is: how does a series of reviews up the chain of authority add value? Also, at lower dollar values and approval levels, does 100 percent review of every routine action really add value to the process?

One suggested approach for limiting unnecessary review has been to raise the small purchase level so that contracting officers are granted discretion over routine, low-dollar actions. However, even if the small purchase limit were to be raised from the current \$25,000 to \$50,000 or even \$100,000, there will still be a series of reviews up the hierarchy for the remaining high-dollar actions, or a total review of every low-dollar action. These reviews will still add little value to the process.

Future Process

Small purchase limit changes alone will not solve this problem. There needs to be a change in how procurement actions are processed. Instead of reviewing each action, management should focus on improving the system by reviewing the process itself, not its output. Reviewers from higher levels should review the policies and procedures at an activity, and if these are acceptable, they should grant authority for classes or groups of procurements without the need for individual reviews of routine actions, regardless of dollar value. Additionally, the contracting officer should be the highest level of review necessary for almost any action. The exception would be procurements for unusual commodities or services or with terms and conditions unusual for that procurement activity.

Local review staffs should be reduced and the personnel used to improve training and professionalism of the line work force. Higher headquarters

procurement review staffs should be conducting process or system reviews, as opposed to individual action reviews.

This change in review philosophy goes along with congressional desires for a more professional and responsible contracting workforce, as expressed by the Defense Acquisition Workforce Improvement Act.

Benefits of the Future Process

There will be fewer review staff personnel, who add little value to individual procurement actions. Less time will be spent processing actions, and therefore there will be more productivity from line procurement personnel.

PERFORM SIMULTANEOUS PROCUREMENT REVIEWS

This process improvement would streamline coordination and review by using electronic networks to send the proposed document and file to several individuals simultaneously for their action. It also would eliminate repetitive reviews, since the automated system can be programmed to require standard outcomes for specific types of procurement actions. Actions with documents or files contrary to programmed policy would be exceptions requiring management review.

Current Process

Procurement now depends on paper forms and files to document the decisions and actions of the buyer and the contracting officer. These actions are often reviewed by superiors, depending on the dollar value of the procurement. If a sequential process and paper documents and files are used, these reviews slow the procurement process. For higher dollar procurements, where the level of approval of the action is higher than that of the contracting officer, reviews are repeated at each staff level as the procurement document and file progress towards approval. We question the value of those repetitive reviews.

Future Process

In a highly automated system, the policy requirements for each type of action can be predetermined and programmed into the system.

Also, coordination requirements need no longer be accommodated in a sequential process but can be acted upon in parallel by simultaneously providing all responsible parties an electronic copy of the document and file, as illustrated in Figure 3-1. Review of a proposed procurement plan can be achieved by broadcasting the plan to all involved offices at once. The automated system can

be programmed to detect documents contrary to policy and either highlight them for correction or else block inappropriate awards without management approvals. The need for repetitive reviews may become obsolete as the system itself reviews the process.

Benefits of the Future Process

Using electronic networks to improve dissemination and coordination of procurement documents and files will speed the flow of procurement actions and shorten administrative lead-time. Also, the elimination of unnecessary reviews will reduce labor costs of procurement analysts and managers. Overall, there should be a reduction in clerical labor costs, because paper documents and files are no longer being handled.

AUTOMATE BUYER ACCESS TO PRE-AWARD INFORMATION

Contracting officers are required to determine the apparent successful offeror's responsibility to perform the proposed contract. This determination entails a review of production capability, financial responsibility, and history of prior performance. If the contracting officer has little knowledge of the offeror, information is obtained by requesting a pre-award survey from the cognizant contract administration office. If the proposed contract is greater than \$1 million (\$2 million for construction), the contracting officer also must obtain an equal employment opportunity (EEO) clearance from the Department of Labor (DoL). These processes are very time-consuming, and they delay contract award.

This process improvement would bring required information to the buyer faster. Instead of having to rely on paper correspondence and telephone calls, the buyer would be automatically presented with pertinent information by the procurement system.

Current Process

Depending on the type and value of a procurement action and the buying activity's knowledge of and experience with the prospective contractor, the buyer often has to request information from external sources. Information for pre-award surveys is required by sending an SF 1403, *Preaward Survey of Prospective Contractor*, to the cognizant Defense Contract Management Command (DCMC) district office. An EEO compliance check is obtained by sending a letter request to the appropriate DoL regional office. Sometimes information or clearances must be requested from the Small Business Administration (SBA). Slow responses to these requests delay contract award.

Future Process

We suspect that much of the information the buyer needs to process the procurement information is already stored in automated data bases. If the buyer's request for information can be automated and routed to the appropriate office and or data base, we can significantly speed procurement awards.

Information on potential sources, product descriptions, price histories, and contractor status (suspension or debarment, pre-award survey results, past performance, EEO compliance, approved rates and factors, and audit results) can be obtained through electronic networks accessing automated data bases. The owners of the information will periodically update their data bases, but remote users will be given query access.

Regional offices of the DoL or district offices of DCMC would maintain the required information in their own data bases. Electronic access through intelligent gateway networks to the data bases can be designed into automated procurement system software. Figure 3-2 depicts such an information network.

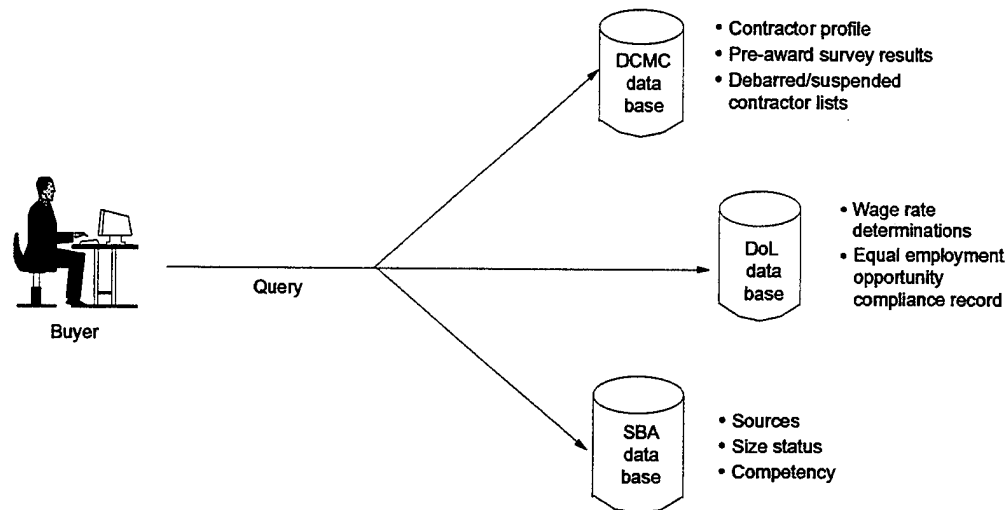


Figure 3-2.
Buyer Information Network

Benefits of the Future Process

The primary benefit will be faster turnaround of information requests. Also, considerable savings will be achieved by eliminating the clerical costs of processing form and letter requests for information.

IMPROVE TIMELINESS OF WAGE RATE DETERMINATIONS

The Davis-Bacon Act and the Service Contract Act require Federal contractors to pay prevailing local wages under construction and service contracts, respectively. Under both kinds of contracts, acceptable wages for the locality where the work is to be performed are determined by the DoL wage determination process. This process of requesting, determining, and receiving wage rates could be greatly improved through the use of modern information technologies.

Current Process

For service contracts valued at greater than \$2,500, the buyer must obtain a DoL wage rate determination for the job categories at the place of performance. This information is currently obtained by submitting an SF 98, *Notice of Intention to Make a Service Contract and Response to Notice*, to the DoL at least 60 days prior to issuance of the solicitation.

For construction contracts in excess of \$2,000, the buyer can obtain general wage determinations for the specific geographic area where the contract is to be performed. General wage determinations are published by the Government Printing Office as the *General Wage Determinations Issued Under the Davis-Bacon and Related Acts*. Updates of general wage determinations are published weekly. But if no general wage rate applies, the contracting officer must request a project wage determination on SF 308, *Request for Determination and Response to Request*, 45 to 60 days prior to issuance of a solicitation. Normally the solicitation is delayed awaiting the DoL's wage rate determinations.

All of these wage determination requests are paper documents that are manually processed by the DoL, although the wage rates themselves are stored in a computer data base. The DoL's Wage and Hour Division recognizes the need for a faster wage rate determination process but does not currently have the resources to develop an electronic interface with contracting activities.

Future Process

Contracting activities would be able to locate current wage rates for a locality by accessing the data bases maintained by the DoL.¹ An automated procurement system could be programmed to query the DoL data base whenever a construction or service contract solicitation is being prepared. If a specific wage rate determination is required, the automated procurement system could generate and transmit the necessary request to the DoL's Wage and Hour Division.

¹From the NPR DoL recommendation (NPR Recommendation PROC05, *Reform Labor Laws and Transform the Labor Department into an Efficient Partner*).

An EDI transaction could be used to transmit the wage rate request and the response to it between the contracting activity's automated procurement system and the DoL wage rate data base.

The availability of wage rates in electronic formats will eliminate the need for the Government Printing Office to publish weekly updates to construction wage rates. These updates can be automatically reflected in the DoL wage rate data bases.

Benefits of the Future Process

The use of an automated link between contracting activities and the DoL will shorten the time required to obtain the wage rate determination. Any reduction in time required to process the wage rate request and response will permit earlier release of the solicitation, reducing PALT for construction and service contracts.

Additionally, using an EDI transaction for wage rate determination requests will eliminate the need for preparing, printing, and mailing the SF 98 and the SF 308.

IMPROVE IDENTIFICATION OF CONTRACTORS

Contracting officers are restricted by Office of Federal Procurement Policy Letter 82-1, as implemented in FAR Subpart 9.4, from soliciting or awarding contracts to individuals or businesses that are debarred, suspended, or ineligible for government procurements. The General Services Administration (GSA) compiles, maintains, and distributes a consolidated list of such individuals and firms entitled *List of Parties Excluded from Procurement Programs*. Although GSA has improved the timeliness of furnishing status information on prospective contractors by providing on-line access to a central data base, contracting officers may still have difficulty in accurately identifying suspended, debarred, or ineligible prospective contractors, because of differences in corporate names and the tendency of fraudulent firms to change their business name or to disguise their true affiliation with a debarred or suspended individual or firm.

With recent OFPP requirements for agencies to check a prospective contractor's past performance prior to contract award, the contractor identification problem will increase.

Current Process

FAR section 9.405 requires contracting officers to review the *List of Parties Excluded from Procurement Programs* immediately prior to award to make sure that no award is made to a listed contractor. The contracting officer or buyer

will look for the contractor's name in the *List*. Aside from the question of the currency of the information, the problem is that names do not provide precise or exclusive identification. There are firms with the same name, firms that do business under various names, and firms that have changed their names. Firms can be misidentified and mistakenly receive a contract award when they may be debarred, suspended, or ineligible.

Future Process

A better approach would assign every organization or individual doing business with the Federal government a unique code to be used in an automated data base of excluded contractors to identify and locate the subject business's records. However, no such universal code now exists. DoD's corporate entity code (CEC) identifies contractors on DD Form 350, *Individual Contract Action Reports*, but its use is limited to actions greater than \$25,000. Contractors that do not receive large awards are not assigned a CEC.

The Tax Identification Number (TIN) required for any business when filing its tax return lacks the detail to distinguish the corporate parent from the division that the debarment or suspension applies to. Other coding schemes, such as DoD's CAGE code, either do not identify every contractor or cannot distinguish firms from each other.

Benefits of the Future Process

Adding a unique code to the GSA listing and to any past-performance data base will streamline pre-award checks by permitting automated procurement systems to access a contractor's unique code and identify excluded or undesirable contractors. Buyers and procurement clerks working in highly automated environments will access files more rapidly by electronic means than they can working with paper lists.

AUTOMATE PROCUREMENT STATUS INFORMATION

The procurement process entails considerable contracting office interaction with the requiring organization and with supporting offices. The primary activity is updating these organizations on the status of their PRs. This requires considerable time on the part of procurement personnel to listen to the inquiry, research the referenced request, and provide the response. These requests for status information are generally valid requests, but there is a better way. By simply recording milestone information as the procurement action moves through the procurement process, automated systems could provide status without human intervention.

Current Process

Buyers, procurement assistants, and procurement clerks are the primary source of information on where a PR or procurement document and file are in the source selection and award processes. Several different individuals call the procurement office inquiring about award status. For example, the requiring activity or the supply office will call wanting to know "when will the purchase order be issued and when can we expect the item?" Another common telephone inquiry is from the accounting and finance office, asking "has the money been obligated or when will it be obligated, and how much has been obligated?" (These funding questions are most common toward the end of the fiscal year when funds are due to expire for obligation purposes.)

The questions are answered by the responsible buyer or clerk, who usually must research the files before calling the inquirer back with the answer. All of this interaction and research takes away from buying and represents a considerable interruption in the process.

Future Process

Information on the progress and status of a procurement action can be stored in a data base after each event in the process is completed. Some automated procurement systems currently have such information manually entered in a data base. However, we envision that this information will be automatically stored in a data base by the automated procurement system as the work is accomplished. This information is a byproduct of the process. For example, as the PR is accepted by the buyer, the buyer can decide the type of procurement document and method that will be used. Once this decision is made, the system can automatically calculate the standard estimate for awarding such a document and project an award date. This information can either be stored for future inquiries from customers or automatically transmitted to their automated systems for tracking supply due-ins or projected obligations. It is even possible for electronic mail or voice mail messages to be generated from such data and sent to the responsible party's mail box.

Benefits of the Future Process

The primary benefit will be fewer interruptions of buyers' or clerks' activities and consequently more time to apply to procurement. Also, the customers will have more accurate and timely information on procurement status.

PROVIDE ELECTRONIC DOCUMENTS TO PAYMENT SYSTEMS

Contract deliveries are paid for by accounting and finance offices that rely on automated systems to record obligations, examine vouchers, and make disbursements. These offices use procurement and contract administration documents to provide data to their automated systems.

Current Process

Automated procurement systems produce hard-copy contracts, orders, and modifications that are provided to the supporting accounting and finance office for recording the obligation and for reference when the invoice, voucher, or receiving documents are used by the voucher examiner. Current practice is for data-entry clerks to abstract information from the procurement document and enter it into the automated system.

Future Process

Instead of printing and mailing contract documents to the accounting and finance office for data extraction and entry, the automated procurement system can produce an EDI transaction. This EDI document will contain all of the information required by the automated payment system. Translation software can convert the information for the application software to make payments.

Benefits of the Future Process

Benefits include (1) elimination of clerical labor in the procurement office required to print and sort copies of procurement documents and mail them to the accounting office and (2) elimination of clerical labor in the accounting office to receive, sort, and enter procurement data into the accounting system.

There will be fewer mistakes as information is moved directly without human intervention. Errors are many times caused by keying mistakes when data entry clerks transpose characters or misread data. The elimination of these problems will also reduce error research by accounting personnel.

These improvements in the contract payment process will speed payment and thereby reduce late-payment interest and increase discounts taken.

AUTOMATE PROCUREMENT REPORTS

This process improvement would eliminate the periodic preparation of procurement action reports by buyers and buying activities. Instead, all the necessary information required for management information and DoD reporting would be contained in the automated procurement system's data bases.

Current Process

Contracting offices throughout the Federal government are required to report individual contract actions over \$25,000 and to summarize, on a monthly basis, all actions \$25,000 and under. Generally, procurement action report forms are completed, reviewed, and forwarded for entry into a central data repository. Some commands and services accumulate award statistics as a byproduct of an automated procurement system and forward the required information in an automated format for updating the central repository.

The current process requires procurement clerks, buyers, and contracting officers to be familiar with the codes used in the reports. The complexity of the reports requires buying activities and higher headquarters to expend considerable resources in preparing and validating the data.

Future Process

Instead of gathering information on procurement actions by means of a separate reporting system, an automated procurement system can be programmed to record the various characteristics of an individual procurement action as a byproduct of the procurement process. This information will then be stored in an operational data base on the regional computer.

When the monthly procurement action reports need to be prepared, a program can be run against the regional data base to extract required data and forward the data to higher headquarters and staff levels. If information is needed at those levels, ad hoc queries can be generated at those levels.

Benefits of the Future Process

Besides the obvious savings in buyer and clerical labor now expended in preparing, editing, and correcting individual and monthly reports and the better utilization of personnel time, a major benefit will be improved quality of the procurement action data reported. Since the data reported are extracted from the procurement process, there will be fewer incomplete or misinterpreted entries, as is the case with today's manual forms.

CHAPTER 4

Policy-Related Improvements

The five process improvements described in this chapter focus on changes to procurement policy and procedures to simplify the procurement process or to eliminate problems before they occur.

RAISE THE SMALL PURCHASE LIMIT

The process and time required to accomplish a procurement action are determined primarily by its dollar value. Large-dollar procurements are subject to formal procedures that may require 6 to 9 months to complete. Small-dollar actions follow simplified procedures that speed contract or order placement. By merely adjusting the dollar limit determining what is a small purchase, the procurement process could be immediately simplified.

Current Process

While only two out of every hundred procurement actions are large purchases (valued at greater than \$25,000), they consume a disproportionate amount of procurement resources. The primary reason is that large purchases require full and open competition through formal solicitation and evaluation procedures. The time required to conduct a formal source selection can vary from 4 to 9 months, depending on its complexity and on the number of offerors. Time requirements for synopsis publication, solicitation release, and receipt of offers are set forth in the FAR.

Procurements valued at less than \$25,000 have less rigid procedures. Contracting officers have considerable discretion as to adequacy of competition and the amount of documentation required to process a small-dollar procurement action.

Future Process

An increase in the small purchase limit from \$25,000 to \$100,000 will simplify approximately 55 percent of all currently large-dollar procurement actions,¹ permitting contracting officers to streamline source selections and make decisions with fewer constraints. In contrast to a highly structured procurement

¹Table 5, *Department of Defense Prime Contract Awards by Size*, P08 Report, Directorate for Information Operations and Reports (DIOR).

process based on regulatory requirements, the simplified process is much more flexible and responsive.

Benefits of the Future Process

Major reductions in average procurement lead-time will result from raising the small purchase limit to \$100,000, because simplified procedures will be applied to a greater number of procurements. Also, the use of simplified procedures will produce large reductions in procurement labor hours required to award annually the approximately 120,000 procurements under \$100,000 that are now classified as large purchase actions because they are over \$25,000.

ESTABLISH PROCEDURES TO AVOID UNAUTHORIZED COMMITMENTS

One recurring, time-consuming problem for contracting officers is the need to ratify unauthorized procurements (also known as unauthorized commitments) made by individuals who are not authorized to obligate the U. S. Government. The occurrence of these unauthorized acts would be reduced if personnel were more aware of what actions are prohibited and how supplies and services are to be properly acquired.

Current Process

Government employees and Military Service members occasionally direct sales or maintenance personnel to deliver an item or perform a task without first going through supply or maintenance, finance, and procurement channels to establish the requirement, obtain funding, and issue a procurement document. The primary problem is that funds may not be available and there is no way to pay the contractor, thereby violating the Anti-Deficiency Act. Another problem is that the unauthorized contractor may be ineligible for government contracts because of its being on the *List of Parties Excluded from Procurement Programs*. And, lastly, the item or the service requested might not have been properly priced or might be available from another source, including base supply, at a more reasonable price. To preclude such problems, procurement regulations vest the authority to obligate the government in the contracting officer and in the contracting officer alone.

The current process of dealing with unauthorized commitments is reactive, working to resolve the problem only after it has arisen. It should be noted that almost all unauthorized procurement actions are resolved through procedures whereby a contracting officer investigates and documents the circumstances and requests ratification by higher authority. Rarely does the unauthorized contractor not receive payment.

The ratification procedure is time-consuming and distracts procurement personnel from coping with their current workload. Ratification actions add no value to the procurement process. They merely provide proper authority and funding after the fact.

Future Process

A better approach would educate personnel who by virtue of their positions are prone to making unauthorized commitments (e.g., building managers, equipment managers, engineers and scientists) on what their authority is and is not and how to acquire supply items and services through proper channels. The key is a training program that emphasizes why the requirement, funding, and procurement document approach is necessary and how its abuse creates problems that can result in disciplinary action.

A complementary approach would recognize the fact that most, if not all, of these unauthorized actions will eventually be authorized. We can improve the buying process by providing classes of employees or managers more buying discretion by establishing government credit card programs or blanket purchase agreements. Instead of having unauthorized actions and ratifying them after the event, why not fix the problem at the beginning of the process by providing the buying authority up front? Of course, individuals granted authority to acquire items by using government credit cards or blanket purchase agreements will require training on their proper use and how to avoid abuse.

Benefits of the Future Process

The objective of unauthorized commitment avoidance training will be to reduce the number of ratification actions and, therefore, the time procurement personnel spend resolving these problems.

Although government credit card and blanket purchase agreement programs impose some workload on contracting personnel to oversee each program's operation, the payoff is fewer unauthorized commitments and fewer time-consuming investigations and ratification actions.

Fewer ratification actions for contracting personnel – achieved through training and credit card and blanket purchase agreement programs – means more time available for authorized procurement actions.

APPLY BEST-VALUE CONTRACTING TECHNIQUES

Contract placement functions (the tasks accomplished prior to award) are often treated separately from contract administration functions, without regard to how source selection may have an impact on contract administration costs. If a

contractor is selected simply on the basis of low offered price but eventually increases costs because of quality and delivery problems, the supplies or service may end up having little or no value, or at least costing the government more than if they had been obtained from another contractor.

Current Process

Procurement awards are generally based on bid or proposal prices, without regard to past performance. But some contractors' performance creates problems that have to be resolved during contract administration. These problems may be due to product quality, late delivery, packaging discrepancies, transportation discrepancies, or invoicing errors. Various government personnel (e.g., contract administrators, quality assurance representatives, transportation specialists, and accounting technicians) must become involved to resolve these problems. Some contractors' products turn out to be too costly when their contract administration costs are added to the product's price.

Future Process

Contractors' offers will be adjusted to take into account projected administrative costs based on their previous contract performance. This is a best-value selection technique that recalculates offered prices by applying a factor either for additional or for lower expected administrative costs. The offers will then be ranked by best-value prices, and the offeror with the lowest overall price will be selected as the apparently successful offeror. If an offeror has no previous performance history, its offered price will not be adjusted. If an offeror's past performance indicates high administrative costs, the factor applied will be greater than 1, so that the best-value price will be calculated as greater than the offered price. If low administrative costs have previously been experienced, the adjustment factor will be less than 1, so that the best-value price will be less than what was offered.

Benefits of the Future Process

Contractors whose performance creates workload and additional costs for government personnel will be incentivized to improve their performance. Contractors posing fewer problems will be rewarded.

The result will be that contract administration costs will be reduced as high-cost contractors are not selected. Customers of the procurement process should be more satisfied with the supplies and services provided by "best-value" contractors.

DELEGATE ROUTINE DECISIONS TO LOWER LEVEL PERSONNEL

Contracting officers are required to sign all contract modifications, regardless of their degree of impact on the contract. In some cases this requirement burdens contracting officers with routine administrative actions that are best taken care of by a procurement clerk and signed by a buyer.

Current Process

Contracting officers are charged with obligating the government when they sign contractual documents. However, there are many no-cost, purely administrative modifications to a contract that do not obligate the government but that — under the present system — must still be reviewed, approved, and signed by the contracting officer. The contracting officer adds no value to this process, because these minor administrative changes are normally prepared by a procurement clerk and reviewed by the buyer.

Future Process

While the determination of what constitutes an obligation is best left to the responsible contracting officer, there are categories of routine, no-cost actions that should be delegated to the buyer for approval (e.g., amended shipping instructions that change ship-to points without changing costs, or modifications that correct administrative errors in the long-line accounting classification cited in the basic contract). In both examples, the contract change request will come from a third party (i.e., the requiring activity or the accounting and finance office), so the procurement clerk would not be initiating the change independently. The procurement clerk can prepare the contract modification and the buyer can review and approval it. This separation of duties will assure some degree of process integrity.

Benefits of the Future Process

The primary benefit will be that the contracting officer, being relieved of the burden of routine no-cost administrative modifications best left to the clerk and buyer, will have more time for more important issues.

The secondary benefit will be that the clerk and the buyer will assume more responsibility without direct oversight. Increased responsibility may contribute to improved esteem and professionalism.

DELEGATE QUALITY DETERMINATIONS TO INSPECTORS

Contracting officers spend an inordinate amount of time reviewing progress on service and construction projects so invoices can be approved for payment, and these reviews duplicate oversight responsibilities of government inspectors.

Current Process

As performance or construction progresses and costs are incurred, contractors submit invoices for approval and payment. The contracting officer is charged with determining whether adequate progress has been made on the project relative to the cumulative expenditures on the contract. The current invoice is reviewed by the contracting officer, who determines progress by actually visiting the project site. The government inspector supports this process.

Future Process

Our recommendation is to provide the government inspector with the training and authority to determine quality and progress of the project. This responsibility can be delegated to the inspector so that only exceptions will be referred to the contracting officer for resolution.

The accounting and finance system can be programmed to make payments on the basis of proper invoices and acceptable inspections. The contracting officer will not be involved unless a problem requiring a cessation of payments occurs.

Benefits of the Future Process

Contracting officers will not duplicate inspector duties, leaving more time for procurement matters. A more professional construction inspector work force that is not being overruled by contracting personnel will possess greater self esteem and deservedly earn the respect of contractor personnel, so that eventually project quality will improve.

CHAPTER 5

Standard Procurement Data

One impediment to procurement improvement is duplication of information and lack of standard information across the procurement process. The three process improvements described in this chapter attempt to resolve these underlying problems.

ESTABLISH ONE PROCUREMENT DATA RECORD

Buyers and procurement clerks spend a great deal of time entering information into automated procurement systems or manually completing procurement forms. Once information is entered into the automated procurement system or into any automated system that can interface with it, the information would not be typed again. This process improvement calls for single-point, single-time data entry.

Current Process

The memoranda, determinations, forms, procurement plans, business clearances, and justifications that collectively form a procurement document and its supporting file contain considerable duplicate information. For example, buyers and clerks find themselves rekeying into the appropriate parts of the purchase order line item descriptions, quantities, and delivery schedules already contained in the PR. Worse, some buying offices have the buyer transcribe information from the PR to data entry forms for clerks to key into an automated procurement system. Another example is the repetition of standard information (e.g., procurement document number, type of contract, dollar value, and buyer's name and telephone number) on numerous internal forms used to obtain contract writing, procurement review, legal review, and small business coordination.

Future Process

Instead of repetitively entering the same information into each part of the procurement document and file, the automated procurement system will be programmed either to extract information from the automated source documents (such as PRs, SOWs, and accounting certifications) or to capture it just once through data entry. Extract programs will either pull the necessary information from the automated requirements system or locate it in the procurement

system's data base. Implicit in this process improvement is the storage of information so that it is in only one place but is available for multiple uses.

Benefits of the Future Process

This process improvement will save buyers and clerks time in preparing procurement documents and files. The display screens of the automated procurement system will prompt them through the required tasks for the type of procurement action at hand. In so doing, the menu screens will already be filled in where information is already known by the automated system.

An additional benefit is increased data accuracy. Because information will be captured and stored only once, there will be less chance of data entry errors (e.g., transposition of numbers).

STANDARDIZE UNIFORM CONTRACT LINE ITEM FORMATS

The Uniform Contract Line Item Numbering System defined in DoD FAR Supplement (DFARS) Subpart 204.71 is not required for all contracts. However, as automated contract administration and payment systems become more common, a standard content, definition, and structure for line items, accounting classifications, and delivery schedules will be needed so that automated systems can communicate with each other.

Current Process

DoD contracts must be structured in accordance with format, numbering, and content standards specified by the FAR and DFARS. Contracts are written in accordance with these standards so that they are understandable and complete.

Line item format is important to accounting personnel, who must pay on the basis of what was ordered, what was delivered, and what funds have been allotted to each item. Contracts establish line items, delivery schedules, and accounting classification reference numbers to state contract requirements clearly.

However, DFARS 204.7104 exempts from these uniform line item requirements contracts that are to be locally paid and administered. This exemption has not posed a problem for local accounting offices, since they are usually paying for locally written contracts with local funds. But problems arise when contract administration and/or payment are delegated to regional or central activities not familiar with local procedures, units, or funding; hence the need for uniformity.¹

¹The Defense Finance and Accounting Service, as part of its consolidation of all finance and accounting in one DoD agency, is planning to centralize installation-level vendor payments.

Since contract preparation, administration, and payment are increasingly automated processes, it is imperative that standard structures and formats be used if information is to be passed without clerks having to extract information from paper documents and key data into an automated system.

Future Process

Automated contract writing systems at the installation level will be programmed in accordance with DFARS uniform contract line item standards, permitting payment and/or administration to be performed elsewhere without expensive and possibly inaccurate rekeying of data into contract administration or payment systems.

Benefits of the Future Process

Besides the labor cost avoidance benefit, the use of uniform line item formats will permit contract payment functions to be undertaken by regional or central activities. Centralization or regionalization of contract payment activities will reduce operating costs of the Defense Finance and Accounting Service (DFAS). Lower operating costs can be passed on to DFAS's customers in the form of lower fees for contract payment services.

STANDARDIZE PROCUREMENT DOCUMENTS

Some procurement offices can quickly generate a procurement file and document from a predefined, standard format stored in their word-processing or automated procurement system. This concept of predefined "model" formats for various types of procurements could be expanded and improved by integrating word-processing and data processing applications.

Current Process

Prior to the general use of word-processing automation to prepare solicitations, contracts, and orders, buying activities manually prepared their procurement documents. Buyers described the type and value of the procurement instrument, selected from a standard checklist appropriate standard provisions/clauses for that type of procurement, and had a procurement clerk type and assemble the procurement document and file. At best, clerks had pre-printed standard provision/clause pages and "form letter" copies of standard memoranda, so that they could assemble the procurement instrument and its supporting file more rapidly.

Word-processing automation has greatly improved this paper production process by permitting standard documents and forms to be recalled from

memory and completed on the video display before printing. The advantage has not been just reduced production time but also flexibility in tailoring the procurement instrument.

Future Process

Automated procurement systems can do more than simply streamline the production of paper documents and files. They can interface with other information sources, collect relevant information, and fill in holes in the standard procurement instrument and file for a given type of procurement. In other words, automated procurement systems can be used to generate complete procurement documents from standardized word-processing formats by combining information from the incoming requirement package with the buyer's decisions as to procurement type and approach.

Just as clerks now no longer manually create routine documents and files, they will no longer word-process standard documents and files from information provided by the buyer or abstracted from the PR. These standard documents and files will be assembled automatically as the buyer views the requirement on the video display and selects a procurement type and approach. The buyer's choices will be entered by the buyer, and the information necessary to complete the standardized word-processing documents will be automatically extracted by the automated procurement system and entered in the appropriate location.

Benefits of the Future Process

Information technologies permit routine procurement documents and files to be assembled in standard formats using predefined information with greatly reduced data entry and clerical requirements. Buyers can view incoming PRs, select the desired procurement approach, and be prompted for required decisions or information to complete the procurement package. For routine actions, the required data entry and document processing can be accomplished in minutes by the individual most knowledgeable about the procurement — the buyer. The procurement clerk's labor is best applied elsewhere (e.g., non-routine procurement actions).

Not only are there considerable labor cost savings when the procurement clerk is removed from the production process, but the procurement instrument and supporting file can be completed faster and with less likelihood of error with the buyer working directly using the video screen, mouse, and keyboard.